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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
.10/552,826	10/07/2005	Satoshi Yasui	Q90673	9465
<div>23373 7590 07/23/2007</div> <div>SUGHRUE MION, PLLC</div> <div>2100 PENNSYLVANIA AVENUE, N.W.</div> <div>SUITE 800</div> <div>WASHINGTON, DC 20037</div>				
			EXAMINER	
			STEELE, JENNIFER A	
			ART UNIT	PAPER NUMBER
			1771	
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			07/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/552,826	YASUI ET AL.	
	Examiner	Art Unit	
	Jennifer Steele	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the islands in the sea weave of claim 13 and the triple layer woven or knit fabric of claim 15 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 17 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 17 describes a woven or knitted fabric wherein on the surface of said woven or knitted fabric is "raised by the raising treatment". The raising treatment is not described in the specification in such as way as to enable one skilled in the art to which it pertains, to make the invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 13 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 13 refers to a "woven fabric structure in which a group ($W_{(1)}$) consisting of a plurality of warp yarns...and a group ($W_{(1+2)}$)...and the warp yarn groups intersect a group ($F_{(1)}$)...and a group ($F_{(1+2)}$)". The terms ($W_{(1)}$), ($W_{(1+2)}$), ($F_{(1)}$)

and $(F_{(1+2)})$ are not defined in the claim and therefore the claim is indefinite and fails to describe the invention.

4. Claim 15 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 15 describes a "triply knitted structure ...in every adjacent two layers of the three knitted layers, either one of the two layers being tucked from the other" wherein the term "in every adjacent two layer" it is unclear which two layers the applicant is describing and "either one of the two layers" it is not clear which two layers are being referenced.

5. Claim 17 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 17 describes a woven or knitted fabric wherein on surface of said woven or knitted fabric is "raised by the raising treatment". The raising treatment is not described or defined and therefore the claim is indefinite.

6. Claim 19 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 19 does not clearly define or describe the cover factor in the claim and therefore the claim is indefinite.

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 1-3, 7-9, 12, 18 and 20-24 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Umino et al. (US 6,756,329). Umino teaches a synthetic fiber capable of absorbing and disabsorbing moisture comprising a component capable of absorbing and disabsorbing moisture and a fiber-forming polymer. Umino teaches a fiber that is made into a crimped textured yarn that can be used in knitted and woven fabrics (col. 6, lines 20-25). Umino teaches knitted and woven fabrics are made from the entangled and mixed yarn where the fabric is made of 100% of the moisture absorbing yarn or Umino teaches the knitted and woven fabrics can be made by mixing the entangled and mixed yarn with other yarns by the method of weaving or knitting as long as the property of the present invention is not diminished (col. 9, lines 28-35). Umino teaches an entangled and mixed yarn wherein the first fiber is a polyimide series fiber, entangled together with the second fiber of a polyester series fiber. Umino teaches the entangled and mixed yarn contains nylon 4 having high moisture absorption and disabsorption or a high moisture absorption, disabsorption and water absorbing polymer such as polyvinyl pyrrolidone, polyetherester amide and modified polyethyleneoxide (col. 9, lines 35-45). Umino

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teaches knitted and woven fabrics containing the entangled and mixed yarn mentioned above can provide a touch of polyester and at the same time can keep the clothes comfortable without any slippery or tacky wet touch, because in wearing the swelled polyamide series fiber, absorbing perspiration and moisture does not have contact to the skin (col.9, lines 59-60). Umino is silent with respect to how the swelled polyamide affects the knit or weave openings. Umino teaches examples of nylon 6 or polyethylene terephthalate as the fiber forming polymer with modified polyethyleneoxide as the moisture absorbing and disabsorbing component mixed and then melt spun to form the fibers. Umino teaches properties of moisture absorption, moisture disabsorption, tensile strength, bending resistance, boiling water shrinkage, dry shrinkage but is silent with respect to the property of self-elongation and elongation to break of 200%. Umino is silent with respect to the property of air permeability and does not teach that the air-permeability increases when the fabric is wet with water. However, Umino teaches that the moisture absorption and disabsorption process is one that provides for moisture to move from one side of the fabric to the other and therefore teaches moisture vapor permeability (col. 3, lines 52-67). As to claim 2, Umino does not teach the self-elongation properties as described in claim 2. As to claim 3, Umino does not teach the difference ($E(1) - E(2)$) between the self-elongation of absorbing water of yarn (1) and the self-elongation upon absorbing yarn 2. As to claim 12, Umino does not teach the property of roughness.

When the reference discloses all the limitations of a claim except a property or function, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention the examiner has

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basis for shifting the burden of proof to applicant as in *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). See MPEP § 2112- 2112.02

As to claim 7, Umino teaches a composite yarn in example 11 where a polyamide fiber with the moisture absorbing component of polyethyleneoxide and the polyester fiber were entangled by air in order to obtain the entangled and mixed yarn (col 23, lines 7-15).

As to claim 8, Umino teaches a moisture absorbing fiber comprised of a polyester which includes polybutylene terephthalate (col. 7, lines 45-49) and polyethyleneoxide (col. 16, lines 40) which is equivalent to polyoxyethylene glycol.

As to claim 9, Umino teaches polyester as the component that does not absorb water and swell (col. 9, lines 55-60).

As to claim 20, Umino teaches a woven or knitted fabric containing two different types of yarns wherein the core of the yarn is a high-water absorbing yarn and the sheath is a low water-absorbing, self-elongating yarn (col. 23, example 13).

As to claim 22-24, Umino teaches the need for fabric and fiber that has tensile strength, abrasion resistance, dimensional stability, quick drying and is broadly used in the field of clothing material. Umino does not teach specific uses for the fabric such as an article of clothing. Claims 22-24 are statements of intended use and do not distinguish the claimed product from Umino. The fabrics of Umino could be used for applications such as clothing, underwear and sportswear. Therefore it would have been obvious to one of ordinary skill in the art to at the time the invention was made to employ the moisture absorbing and disabsorbing fabric in the range of uses in claim 22-24 motivated to employ the fabric in all possible applications requiring a fabric that absorbs moisture.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
8. Claim 4-6 rejected under 35 U.S.C. 103(a) as being unpatentable over Umino et al. (US 6,756,329) in view of Chesebro, Jr. (US 5,095,548). Umino teaches a synthetic fiber capable of absorbing and disabsorbing moisture comprising a component capable of absorbing and disabsorbing moisture and a fiber-forming polymer. Umino teaches a fiber that is made into a crimped textured yarn that can be used in knitted and woven fabrics (col. 6. lines 20-25). Umino differs from the current application and does not teach combined yarns in parallel to form composite yarn loops in the circular knitting structure.
- Chesebro teaches a moisture control sock where moisture control characteristics are imparted to the sock by a hydrophobic yarn knit in plated relationship with the body yarn

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in partial courses extending throughout the sole and a hydrophilic yarn knit in plated relationship with the body yarn in partial courses extending throughout the instep.

(ABST). As to claim 5 and 6, the structure of Chesebro can be used in a woven fabric in that the parallel yarn relationship throughout the fabric and Chesebro changes the pattern of the yarns throughout the sock to provide different characteristics at different places in the sock in order to absorb moisture or allow moisture to evaporate (Fig. 4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a knit structure of Chesebro incorporating two yarns of different moisture absorbing properties knit in parallel motivated to produce a fabric with moisture absorbing properties.

9. Claim 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Umino et al. (US 6,756,329) in view of Chesebro, Jr. (US 5,095,548). Umino differs from the current application and does not teach a fabric with areas of high moisture absorbing yarns and area of low moisture absorbing yarns. Chesebro teaches a sock with a knit pattern so as to have areas where the sock is hydrophobic and areas where the sock is hydrophilic as illustrated in Fig. 1-4. It would have been obvious to one of ordinary skill in the art to have employed a knit pattern in the fabric of Umino motivated to produce a fabric with varying moisture absorption properties throughout the fabric.

10. Claim 10 and 11 rejected under 35 U.S.C. 103(a) as being unpatentable over Umino et al. (US 6,756,329) in view of Dawson (US 6,770,579). Umino teaches a synthetic fiber capable of absorbing and disabsorbing moisture comprising a component capable of absorbing and disabsorbing moisture and a fiber-forming polymer. Umino

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teaches a fiber that is made into a crimped textured yarn that can be used in knitted and woven fabrics (col. 6, lines 20-25). Umino teaches that the water absorbing yarn swells which would infer that it changes, however Umino differs and does not measure the change in the open areas that results from absorbing moisture. Umino differs from the current application and does not teach air permeability.

Dawson teaches a material which controls porous properties in relation to changes in local environment thus allowing fluids to pass through the film or material (ABST).

Dawson teaches a material comprising at least two layers having different fluid absorption properties. Dawson teaches that the layers are cut to provide a plurality of close fitting flaps through the film or material. When the different layers absorb moisture at different rates and one layer swells, the strain differences between the layers caused by their different fluid absorption properties will cause the flaps to bend providing a plurality of openings in the layer (col. 1, lines 37-44). Dawson teaches a change in porous properties which is equated with permeability.

When the reference discloses all the limitations of a claim except a property or function, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention the examiner has basis for shifting the burden of proof to applicant as in *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). See MPEP § § 2112- 2112.02

It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a fiber that swells and changes dimension when absorbing moisture in order to change the material or fabric motivated to produce a fabric that changes when the fabric is wet and when the fabric is dry.

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11. Claim 14 and 15 rejected under 35 U.S.C. 103(a) as being unpatentable over Umino et al. (US 6,756,329) in view of Safrit et al. (US 4,341,096). Umino differs from the current application and does not teach a three layer fabric. Safrit teaches a three layer knitted fabric that provides cushioning and moisture absorbing characteristics. Safrit teaches inside and outside fabric layers of hydrophobic yarn and the intermediate layer of hydrophilic yarn. While Safrit teaches a moisture absorbing layer as the intermediate layer and moisture disabsorbing layers on the outside and the current application teaches the outside layers are the moisture absorbing layers, it would have been obvious to one of ordinary skill in the art at the time the invention was made to produce a moisture absorbing fabric with three layers motivated to produce fabric that removes perspiration from the body and allows the moisture to evaporate into the air.

12. Claim 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Umino et al. (US 6,756,329) in view of Yamazaki et al. (US 2003/0056553). Umino differs from the current application and does not teach the yarn density satisfying the equation of claim 16. Yamazaki teaches a knit structure with moisture absorption properties and softness and discloses a yarn course and wale count that in the range of claim 13. Yamazaki teaches a knitted fabric having a course number of 30 to 70 courses/2.54 cm and a wale number from 30-70 wales/2.54 cm (ABST). Yamazaki teaches a fabric for use in undergarments and garments such as shorts, shirts, and garments that can be worn so they are seen [0027]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a knit structure with the yarn density of

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Yamazaki in the knit fabric of Umino motivated to produce a fabric that has moisture absorption and a soft feel as would be desired for use in sportswear and underwear.

13. Claim 19 rejected under 35 U.S.C. 103(a) as being unpatentable over Umino et al. (US 6,756,329) in view of Yamazaki et al. (US 2003/0056553). Umino does not teach a cover factor. Yamazaki teaches two yarns and teaches fiber sizes of 20-550 dtex, 30-220 dtex and the preferably the single filament size of from 0.1 to 12 dtex in view of the soft feeling [0037]. Yamazaki and Umino do not teach a cover factor but Umino in view of Yamazaki teaches a two yarn and knit structure that is the same as the current application and therefore it would have been obvious to one of ordinary skill in the art to produce a fabric with the cover factor.

14. Claim 17 rejected under 35 U.S.C. 103(a) as being unpatentable over Umino et al. (US 6,756,329) in view of Toda (US 4,733,546). Umino differs from the current application and does not teach a raising treatment. Toda teaches a knitted fabric having a multilayered structure made for good water-permeability, water diffusibility and suitable for sportswear (ABST). Toda teaches the back surface of the fabric may be processed by mechanical treatment such as raising or buffing so that the fiber composing the back surface is opened and cut to have a plush-like appearance and large inter-fiber space (col. 6, lines 57-61). It would have been obvious to employ a raising treatment of Toda in the fabric of Umino motivated to provide the desired surface texture and inter-fiber space.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the

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unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

15. Claim 1-24 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1-20 of copending Application No. 10/548630. Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications teach a fiber and fabric of two yarns in a knitted or woven structure wherein one yarn absorbs moisture and the other yarn does not.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Steele whose telephone number is (571) 272-7115. The examiner can normally be reached on Office Hours Mon-Fri 8AM-5PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


ELIZABETH M. COLE
PRIMARY EXAMINER

7/9/2007